

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Original) A method for shunting toxic substances, present in a brain ventricle, to the sinus system of an individual suffering from, or at risk of developing, a condition related to the retention and/or accumulation of toxic substances in brain tissue and/or the CSF space, said method comprising the steps of

i) providing a shunt system for shunting cerebrospinal fluids comprising toxic substances, such as amyloid proteins, from a brain ventricle to the sinus system of an individual, wherein said shunt system comprises

a) a shunt body allowing fluid communication between a brain ventricle and a part of the sinus system of the individual,

wherein said shunt body comprises a flow restricting component capable of maintaining a passive and essentially constant resistance to flow of cerebrospinal fluids through the shunt body,

b) a brain ventricle catheter capable of being connected to the shunt body at a first location thereof,

wherein the brain ventricle catheter is capable of draining cerebrospinal fluids from a brain ventricle to the shunt body, and

c) a sinus catheter capable of being connected to the shunt body at a second location thereof,

wherein the sinus catheter is capable of draining to the sinus system of the individual cerebrospinal fluids having been drained from a brain ventricle and passed through the flow restricting component of the shunt body to the sinus catheter,

wherein optionally either all or part of i) the internal or external surface of the shunt body, or either all or part of ii) the internal or external surface of the brain ventricle catheter, or either all or part of iii) the internal or external surface of the sinus catheter, can comprise a biocompatible/hemocompatible material comprising an

inert surface preventing biological material from maintaining contact with the inert surface, and/or comprising a hemocompatible surface coated with a plurality of charged species capable of increasing the hemocompatibility of the surface,

- ii) inserting into a brain ventricle of the individual the brain ventricle catheter of the shunt system capable of being connected to the shunt body at a first location thereof,
- iii) inserting into the sinus system of the individual the sinus catheter of the shunt system capable of being connected to the shunt body at a second location thereof, and
- iv) shunting toxic substances, such as amyloid proteins, present in a brain ventricle to the sinus system of the individual suffering from, or at risk of developing, a condition related to the retention and/or accumulation of toxic substances in brain tissue and/or the CSF space.

2. (Original) The method of claim 1, wherein the condition related to the retention and/or accumulation of toxic substances in the CSF is Alzheimer's disease.

3. (Currently Amended) The method of ~~any of the previous claims~~ claim 1, wherein the condition related to the retention and/or accumulation of toxic substances in the CSF is Down's Syndrome.

4. (Currently Amended) The method of ~~any of the previous claims~~ claim 1, wherein the condition related to the retention and/or accumulation of toxic substances in the CSF is hereditary cerebral hemorrhage with amyloidosis of the Dutch-Type (HCHWA-D) or the like.

5. (Currently Amended) The method of ~~any of the previous claims~~ claim 1, wherein the condition related to the retention and/or accumulation of toxic substances in the CSF is epilepsy.

6. (Currently Amended) The method of ~~any of the previous claims~~ claim 1, wherein the condition related to the retention and/or accumulation of toxic substances in the CSF is Parkinson's disease.

7. (Currently Amended) The method of ~~any of the previous claims~~ claim 1, wherein the condition related to the retention and/or accumulation of toxic substances in the CSF is a polyneuropathy.

8. (Currently Amended) The method of ~~any of the previous claims~~ claim 1, wherein the condition related to the retention and/or accumulation of toxic substances in the CSF is selected from one or more of multiple sclerosis, amyotrophic lateral sclerosis (ALS), myasthenia gravis, muscular dystrophy, dystrophy myotonic or another myotonic syndrome, polymyositis, dermatomyositis, a brain tumor or Guillain-Barre-Syndrome.

9. (Currently Amended) The method of ~~any of claims~~ claim 1 ~~8~~, wherein the toxic substance is one or more of tau, beta-2 microglobulin or A-beta-42.

10. (Currently Amended) The method of ~~any of claims~~ claim 1 ~~9~~, wherein the flow restricting component of the shunt body is capable of maintaining a passive and essentially constant resistance to flow of cerebrospinal fluids through the shunt body of a constant value of from 0.1 to less than 8 mm Hg/ml/min.

11-33 (Cancelled).

34. (Currently Amended) The method of ~~any of~~  
~~claims claim 1 to 33~~ wherein the flow restricting component of  
the shunt body is selected from the group consisting of a  
tubular structure, a plurality of tubular structures, a porous  
mass, a fibrous mass, a structure being restricted by co-  
extending fibres arranged therein, and a structure being  
restricted by co-extending rods arranged therein.

35. (Currently Amended) The method of ~~any of~~  
~~claims claim 1 to 33~~ wherein the flow restricting component  
of the shunt body comprises at least one tubular structure  
having an internal radius of more than 0.05 mm and preferably  
less than 0.50 mm., ~~for example a tubular structure having an~~  
~~internal radius of about 0.06 mm, for example about 0.07 mm,~~  
~~such as about 0.08 mm, for example about 0.09 mm, such as~~  
~~about 0.10 mm, for example about 0.11 mm, such as about 0.12~~  
~~mm, for example about 0.13 mm, such as about 0.14 mm, for~~  
~~example about 0.15 mm, such as about 0.16 mm, for example~~  
~~about 0.17 mm, such as about 0.18 mm, for example about 0.19~~  
~~mm, such as about 0.20 mm, for example about 0.21 mm, such as~~  
~~about 0.22 mm, for example about 0.23 mm, such as 0.24 mm, for~~  
~~example 0.25 mm, such as 0.26 mm, for example 0.27 mm, for~~

~~example about 0.28 mm, such as about 0.29 mm, for example about 0.30 mm, such as 0.31 mm, for example 0.32 mm, such as 0.33 mm, for example 0.34 mm, for example about 0.35 mm, such as about 0.36 mm, for example about 0.37 mm, such as 0.38 mm, for example 0.39 mm, such as 0.40 mm, for example 0.42 mm, for example about 0.44 mm, such as about 0.46 mm, for example a tubular structure having an internal radius of about 0.48 mm.~~

36. (Currently Amended) The method of ~~any of~~ ~~claims~~ claim 32 ~~to 35~~, wherein the flow restricting component of the shunt body comprises a single tubular structure having an internal diameter of less than 0.2 mm.

37. (Currently Amended) The method of ~~any of~~ ~~claims~~ claim 34 ~~to 36~~, wherein the length of the at least one tubular structure of the flow restricting component of the shunt body is in the range of from about 3.0 mm to about 90 mm, ~~such as from about 3.0 mm to about 80 mm, for example from about 3.0 mm to about 75 mm, such as from about 3.0 mm to about 70 mm, for example from about 3.0 mm to about 65 mm, such as from about 3.0 mm to about 60 mm, for example from about 3.0 mm to about 55 mm, such as from about 3.0 mm to about 50 mm, for example from about 3.0 mm to about 45 mm, such as from about 3.0 mm to about 40 mm, for example from about 3.0 mm to about 35 mm, such as from about 3.0 mm to~~

~~about 30 mm, for example from about 3.0 mm to about 25 mm,  
such as from about 3.0 mm to about 22 mm, for example from  
about 3.0 mm to about 20 mm, such as from about 3.0 mm to  
about 18 mm, for example from about 3.0 mm to about 16 mm,  
such as from about 3.0 mm to about 14 mm, for example from  
about 3.0 mm to about 12 mm, such as from about 3.0 mm to  
about 10 mm, for example from about 10 mm to about 90 mm, such  
as from about 10 mm to about 80 mm, for example from about 10  
mm to about 75 mm, such as from about 10 mm to about 70 mm,  
for example from about 10 mm to about 65 mm, such as from  
about 10 mm to about 60 mm, for example from about 10 mm to  
about 55 mm, such as from about 10 mm to about 50 mm, for  
example from about 10 mm to about 45 mm, such as from about 10  
mm to about 40 mm, for example from about 10 mm to about 35  
mm, such as from about 10 mm to about 30 mm, for example from  
about 10 mm to about 25 mm, such as from about 10 mm to about  
20 mm, for example from about 10 mm to about 15 mm, such as  
about 10 mm, for example about 15 mm, such as about 20 mm, for  
example about 22 mm, such as about 24 mm, for example about 26  
mm, such as about 20 mm, for example about 22 mm, such as  
about 24 mm, for example about 26 mm, such as about 28 mm, for  
example about 30 mm, such as about 32 mm, for example about 34  
mm, such as about 36 mm, for example about 38 mm, such as  
about 40 mm, for example about 45 mm, such as about 50 mm, for  
example about 55 mm, such as about 60 mm, for example about 65~~



~~mm, such as about 70 mm, for example about 75 mm, such as about 80 mm, for example about 85 mm.~~

38. (Currently Amended) The method of ~~claims~~ claim 36 ~~or 37~~, wherein the total length of the at least one tubular structure of the flow restricting component of the shunt body is divided in two or more individual segments.

39. (Currently Amended) The method of ~~any of the preceding claims~~ claim 1 comprising the further step(s) of connecting the sinus catheter to the shunt body at a second location thereof, and/or connecting the brain ventricle catheter to the shunt body at a first location thereof.

40. (Currently Amended) The method of ~~any of the previous claims~~ claim 1, wherein cerebrospinal fluid is shunted from a brain ventricle to either or both of the two large venous sinuses of the cranium that begin at the bony protuberance on the middle of the inner surface of the occipital bone at the intersection of its bony ridges and terminate at the jugular foramen on either side.

41. (Original) The method of claim 40, wherein the cerebrospinal fluid is shunted from the brain ventricle and to the sagittal sinus.

42. (Original) The method of claim 40, wherein the cerebrospinal fluid is shunted from the brain ventricle and to the transverse sinus.

43. (Currently Amended) The method of ~~any of the previous claims~~ claim 1, wherein the shunt body of the shunt system further comprises at least one check valve for preventing cerebrospinal fluid present in the sinus catheter or cerebrospinal fluid having been shunted to the sinus system of the individual from flowing back from the sinus catheter or from the sinus system to the shunt body or to the brain ventricle catheter.

44. (Original) The method of claim 43, wherein the at least one check valve of the shunt body does not have any inherent resistance or opening pressure, and essentially does not exert any resistance on the flow of cerebrospinal fluid from the brain ventricle catheter through the shunt body to the sinus catheter.

45. (Currently Amended) The method of ~~any of claims~~ claim 43 ~~and 44~~, wherein the resistance to flow thorough the shunt body is independent of the at least one

check valve and defined solely by the flow resistance of the flow restricting component.

46. (Currently Amended) The method of ~~any of~~ ~~claims~~ claim 43 ~~to 45~~, wherein the operation of the at least one check valve is independent of a predetermined opening pressure to be overcome by the differential pressure defined by the difference between the intracranial pressure and the pressure in the sinus.

47. (Currently Amended) The method of ~~any of~~ ~~claims~~ claim 43 ~~to 46~~, wherein the at least one check valve comprises a ball valve and optionally further comprises valve members selected from the group consisting of guided rigid valve members and flexible valve members, including rigid, ring shaped valve members, and flexible valve members such as tongue-shaped laminae.

48-77 (Cancelled).